REMARKS

Claims 1-22 are pending.

Claims 1-3 and 5-7 stand rejected under 35 USC 103(a) as being unpatentable over Fukunaga, U.S. Patent No. 6,396,863 in view of Serreze, U.S. Patent No. 5,222,090. This rejection is respectfully traversed.

Regarding claim 1, the Examiner asserts that Fukunaga '863 teaches all of the claimed features except for the semiconductor laser device having an oscillation wavelength of larger than 760 nm and smaller than 800 nm. The Examiner asserts, however, that it is well known in the art for high power semiconductor laser devices to have an oscillation wavelength larger than 760 nm but smaller than 800 nm as disclosed by Serreze in col. 1, lines 6-10 and 63-68. Applicants respectfully disagree and submit that the combination of these references does not teach or suggest the claimed features.

Claim 1 is directed to a semiconductor laser device having an oscillation wavelength of larger than 760 nm and smaller than 800 nm, and requires a combination of:

> a substrate (formed of GaAs);
> well and barrier layers (formed of InGaAsP and/or InGaP and/or GaAsP); and
> upper and/or lower guide layer (formed of $Al_zGa_{1-z}As$ ($0.20<z\leq1$).

In contrast, Fukunaga '863 is directed to a semiconductor laser emitting laser light having a wavelength of 0.9 μm 1.1 μm (i.e., 900-1100 nm). The third embodiment of Fukunaga '863, as shown in Figs. 3A-3B and as cited by the Examiner, discloses a combination of:

> substrate 51 (formed of GaAs):
> lower cladding layer 52 (formed of $Al_{z1}Ga_{1-z1}As$ ($0.35\leq z\leq0.7$));
> upper and lower guide layers 57 and 53 (formed of $Al_{z2}Ga_{1-z2}As$ ($0\leq z2\leq 0.2$);
> barrier layer 54 (formed of $In_{x5}Ga_{1-x5}As_{1-y5}P_{y5}$ ($0<x5\leq0.3$, $0\leq y5\leq 0.6$));
> well layer 55 (formed of $In_{x3}Ga_{1-x3}As_{1-y3}P_{y3}$ ($0<x3\leq0.4$, $0\leq y3\leq0.1$));
> barrier layer 56 (formed of $In_{x5}Ga_{1-x5}As_{1-Y5}P_{y5}$ ($0<x5\leq0.3$, $0\leq y5\leq0.6$));
> first upper cladding layer 58 (formed of $In_{0.49}Ga_{0.51}P$); and

second upper cladding layer 64 (formed of $In_{x4}Ga_{1-x4}As_{1-y4}P_{y4}$ (x4=0.49±0.01, $0.9 \leq y4 \leq 1$)).

Serreze is directed to a semiconductor laser emitting laser light having a wavelength of 700-850 nm, and teaches a combination of:

> an active region 20 including barrier and well layers (formed of InGaAsP or AlGaInAs); upper and lower confinement layers (guide layers) 22, 18 (formed of AlGaInAsP); and upper and lower cladding layers 24, 16 (formed of AlGaInP).

Serreze further teaches that examples of suitable fixed composition confinement layers is the use of $(Al_{0.2}Ga_{0.8})_{0.5}In_{0.5}P$ or $Ga_{0.5}In_{0.5}P$ in the case of an InGaAsP quantum well structure (see col. 3, lines 12-14).

Thus, Applicants submit that if Fukunaga '863 were modified in view of Serreze to have a wavelength range of 700 nm – 850 nm, as taught by Serreze, it would also be necessary to use the same materials used in the semiconductor laser device of Serreze. Thus, if Fukunaga '863 were modified in view of Serreze, Fukunaga would have to form its guide layers of AlGaInAsP, or more specifically $(Al_{0.2}Ga_{0.8})_{0.5}In_{0.5}P$ or $Ga_{0.5}In_{0.5}P$, rather than $Al_{z2}Ga_{1-z2}As$ ($0 \leq z2 \leq 0.2$) to achieve the wavelength of claim 1. This would actually teach away from the claimed invention.

As can be easily understood from the Serreze's statement that "[E]xamples of suitable fIxed composition confinement layers is the use of $(Al_{0.2}Ga_{0.8})_{0.5}In_{0.5}P$ or $Ga_{0.5}In_{0.5}P$ in the case of an InGaAsP quantum well structure . . ." (col. 3, lines 12 - 14), there is a specific combination of materials and layers which results in the wavelength disclosed by Serreze, and if one of ordinary skill in the art were to modify Fukunaga '863 in view of Serreze to achieve a wavelength of between 700 nm and 850 nm, as taught by Serreze, one must also modify the materials used in Fukunaga to those materials that result in the desired wavelength. Again, this combination would not result in the claimed invention. The Examiner is impermissibly picking and choosing various elements of these references in an attempt to recreate the claimed invention, and this is improper hindsight.

The remaining claims are allowable at least due to their respective dependencies. Applicants request that this rejection be withdrawn.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 204552028900.

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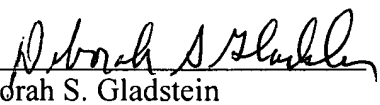
Respectfully submitted,

By 

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